

Required for Jan.

Work Order ID 139750

139750

Item ID: D3847-049

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Aft Wearplate Assembly, Float Gear

Start Date: 12/4/2015 Start Qty: 12.00

12

Cust Item ID:

Required Date: 12/24/2015 Req'd Qty: 12.00

12

Customer:

Reference:

Approvals:

Process Plan:

SH

Date:

20151204

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D3847

C

100

0.00

100

Waterjet

FLOW CNC Waterjet

Memo

1-Cut D3847-9 as per Dwg

Dwg Rev: C

Prog Rev: C

2-Deburr if necessary

0.00

(12)

16/01/21

110

QC2- Inspect parts off machine FAI/FAIB

0.00

110

QC

Quality Control

Memo

0.00

(12)

16/01/21

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause			FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence
Past Expiry Date	☐	Manufacturing Process	OTHER : _____							
Misidentified	☐	Past Due								

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Page 2

Setup Start *NS1*

Stop *NS2*

Customer:

Run Start *NR1*

Stop ***NR2***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Accept Qty	Reject Qty	Reject Number	Insp. Stamp

Quality Control

JAN 21 2016

Brake NC

**DAS
30
9-89**

12

JAN 27 2016

0.00

Quality Control

DAS
38
9-89

12

JAN 27 2016

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment ☐	☐	No Re-verification ☐	☐	Pressure/Forced ☐	☐	Temperature/Cure ☐	☐
Design ☐	☐	Operator ☐	☐	Bending ☐	☐	Set-up ☐	☐
Doc/Data ☐	☐	Offset/Setup ☐	☐	Centre Not Concentric ☐	☐	BOM/Route ☐	☐
Equip/Tooling ☐	☐	Supplier ☐	☐	Cracks ☐	☐	Broken/Damage/Defect ☐	☐
Handling/Pre ☐	☐	Training ☐	☐	Crimp/Kink/Ripple/Wave ☐	☐	Inspection Incomplete/Unqualified ☐	☐
Material ☐	☐	Use for Testing ☐	☐	Cuffs ☐	☐	Contamination ☐	☐
Internal Transport ☐	☐	Poor Information ☐	☐	Crushing ☐	☐	Countersink ☐	☐
Tribal Knowledge ☐	☐	Rushing ☐	☐	Heat Treat ☐	☐	Cut Too Short ☐	☐
LOA ☐	☐	Product Improvement ☐	☐	Wave/Twist in Tube ☐	☐	Instructions Incomplete/Unclear ☐	☐
Substation ☐	☐	Process Improvement ☐	☐	Marks/Chatter ☐	☐	Drill Holes ☐	☐
Past Expiry Date ☐	☐	Manufacturing Process ☐	☐	OTHER : _____			
Misidentified ☐	☐	Past Due ☐	☐				

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		OTHER : ☐					

Work Order ID 139750

139750

Page 4

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Item ID: D3847-049 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Aft Wearplate Assembly, Float Gear
 Start Date: 12/4/2015 Start Qty: 12.00 *12* Cust Item ID:
 Required Date: 12/24/2015 Req'd Qty: 12.00 *12* Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180	QC3- Inspect Part Finish	0.00							OAS 38 189
180									
QC	Memo	0.00							
Quality Control									FEB 01 2016
190	Identify as per dwg & Stock Location: <u>FP-002</u>	0.00							
190									
Packaging	Memo	0.00							
Packaging	LOCATION : FP002								
200	QC21- Final Inspection - Work Order Release	0.00							
200									
QC	Memo	0.00							
Quality Control									FEB 01 2016

12

x12 / 11/16/02/01

MCS FEB 01 2016

MCS FEB 01 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause			FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence
Past Expiry Date	☐	Manufacturing Process	OTHER :							
Misidentified	☐	Past Due								

Picklist Print

December 04, 2015 10:42:27 AM

Page 1

Work Order ID: 139750

139750

Parent Item: D3847-049

D3847-049

Parent Item Name: Aft Wearplate Assembly, Float Gear

Start Date: 12/4/2015

Required Date: 12/24/2015

Start Qty: 12.00

Required Qty: 12.00

Comments:

IPP RevA: New issue DD verified by:EC

IPP REV:B

14.11.25 AS PER DWG REV.C DD VERF:JLM

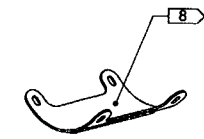
Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304S18GA		Purchased	No				sf	410.3000		20.96842			

M304S18GA

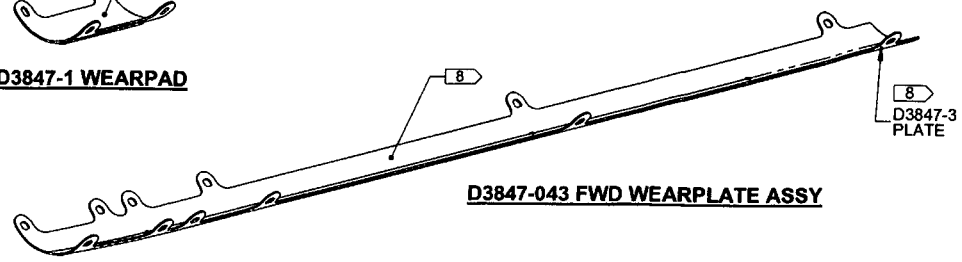
304/316 .050 Sheet

Dec 16 / 01 / 21

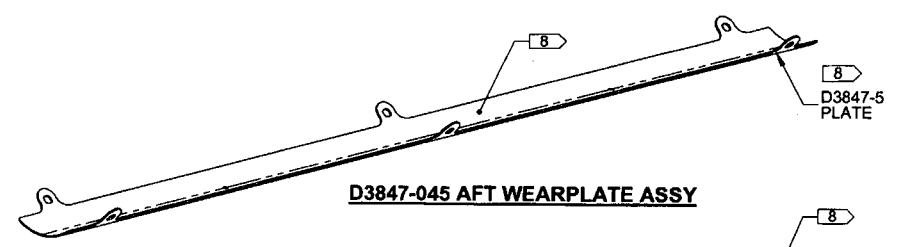
<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
MAT020	402.6	
M128435	22.9	
M132797	5	
M133328	214.7	
M133387	160	1.9
MAT20	7.7	20
M131700	7.7	



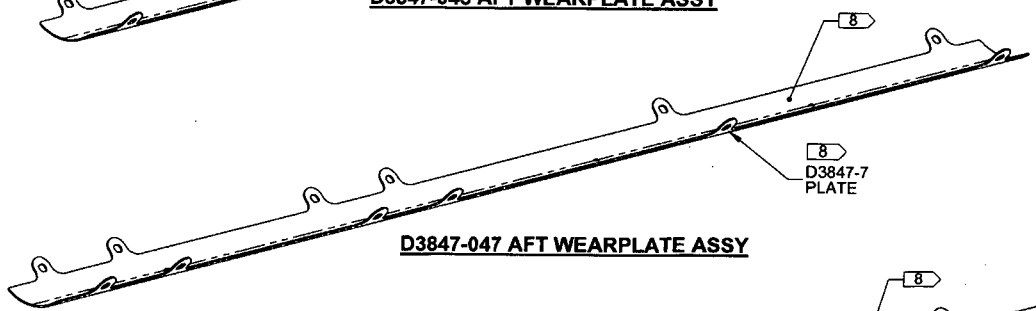
D3847-1 WEARPAD



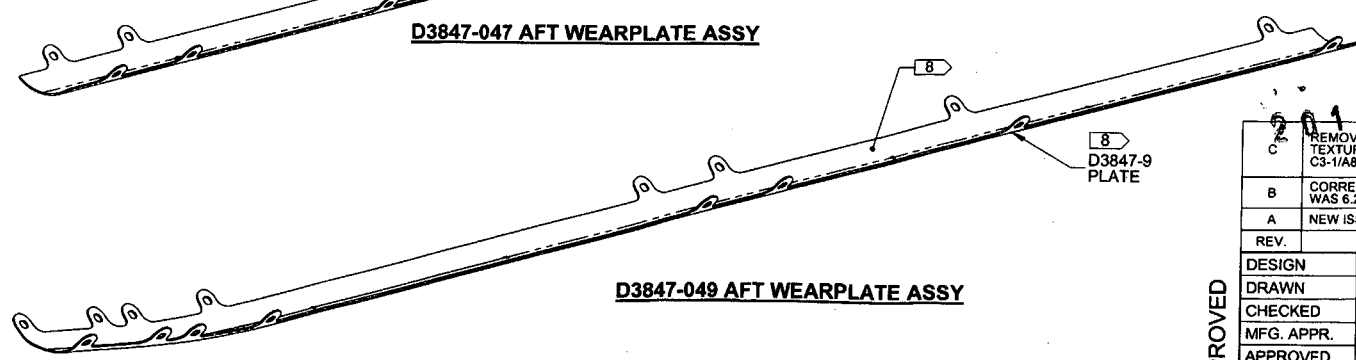
D3847-043 FWD WEARPLATE ASSY



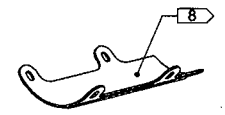
D3847-045 AFT WEARPLATE ASSY



D3847-047 AFT WEARPLATE ASSY



D3847-049 AFT WEARPLATE ASSY



D3847-11 WEARPAD

ITEM	QTY -043	QTY -045	QTY -047	QTY -049	P/N	DESCRIPTION
1	X				D3847-043	FWD WEARPLATE ASSY, STD/FLOAT GEAR
2		X			D3847-045	CENTER WEARPLATE ASSY, STD/FLOAT GEAR
3			X		D3847-047	AFT WEARPLATE ASSY, STD GEAR
4				X	D3847-049	AFT WEARPLATE ASSY, FLOAT GEAR
11	1				D3847-3	PLATE
12		1			D3847-5	PLATE
13			1		D3847-7	PLATE
14				1	D3847-9	PLATE
31	A/R	A/R	A/R	A/R	TEXTURED COATING	SEALANT

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3847-XXX" USING YELLOW PAINT MARKER AT INSIDE SURFACE
- 7) WEIGHT: D3847-043 = 1.48 lbs
D3847-045 = 1.29 lbs
D3847-047 = 1.70 lbs
D3847-049 = 4.88 lbs
- 8) COAT ENTIRE TOP (CONCAVE) SURFACE WITH TEXTURED COATING, 0.020-0.040 THICK, PER DART QSI 005 4.9

139750
20151206 SH

C	REMOVED D3846-3/-5/-7/-9 GASKETS, ZN D2-1, ADDED TEXTURED COATING, ZN B3-1. UPDATED WEIGHTS, ZN C3-1/A8-2	AK	14.08.06
B	CORRECT TYPO D3847-047 WAS D3847-045, ZN B5-1; 5.82 WAS 6.25 (ZN A4-2); 45.28 WAS 45.71 (ZN B4-5)	RF	09.06.30
A	NEW ISSUE	RF	09.03.30
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE USA, INC.	
DRAWN	AK	KENT, WA	
CHECKED	VS	DRAWING NO.	REV. C
MFG. APPR.	JLM	D3847	SHEET 1 OF 7
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	WEARPLATE ASSY	NTS
DATE	14.08.06	COPYRIGHT © 2009 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

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7

6

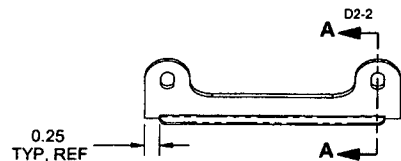
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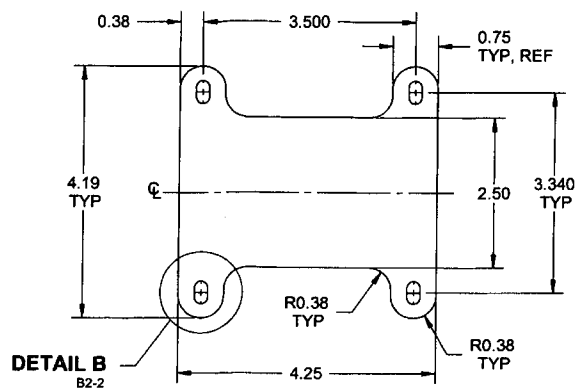
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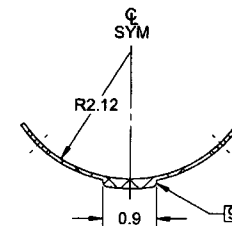
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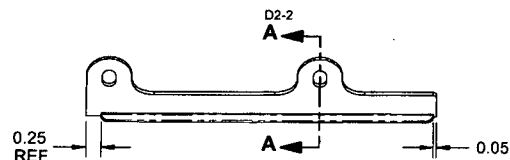
D3847-1 WEARPAD
MADE FROM D3847-1F FLAT PATTERN



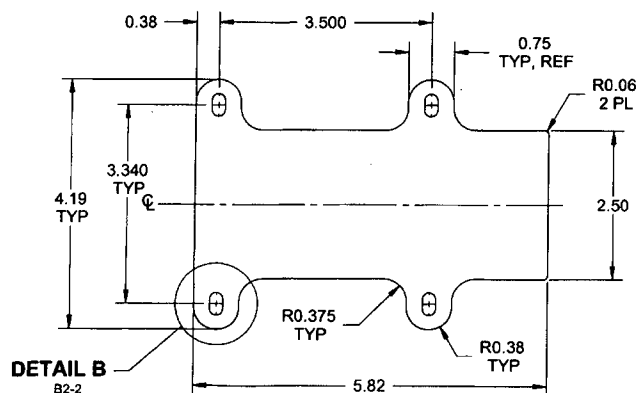
D3847-1F FLAT PATTERN



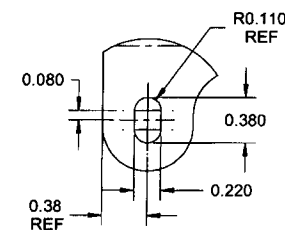
SECTION A-A D7-2
B7-2



D3847-11 WEARPAD
MADE FROM D3847-11F FLAT PATTERN



D3847-11F FLAT PATTERN



DETAIL B C5-2
B5-2
TYP, SCALE 2X

RELEASED

2014 NOV 24 *ap*

NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL PER AMS 5513 OR AMS 5524, 16 GAUGE (0.063 THICK), (REF. DART SPEC. M304S16GA)
- 2) FINISH: POWDER COAT "GREY SANDTEX" (4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3847-X" USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT:
D3847-1 = 0.32 lbs
D3847-11 = 0.47 lbs
- 8) WELD PER QSI 004
- 9) APPLY 2 LAYERS OF 2059B HARDCOAT WELDS TO WITHIN 0.25 OF WEARPAD ENDS 0.19 TO 0.25 THICK UNLESS OTHERWISE INDICATED

APPROVED

DESIGN	RF	DART AEROSPACE USA, INC.	
DRAWN	AK	KENT, WA	
CHECKED	VS	DRAWING NO.	REV. C
MFG. APPR.	JLM	D3847	SHEET 2 OF 7
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	WEARPLATE ASSY	NTS
DATE	14.08.06	COPYRIGHT © 2009 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

8

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6

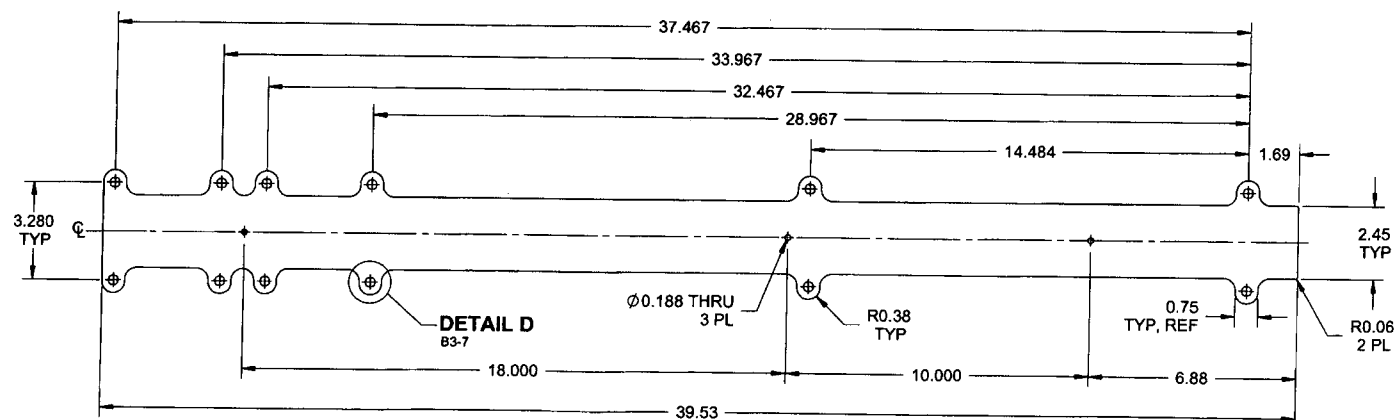
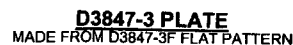
5

4

3

2

1



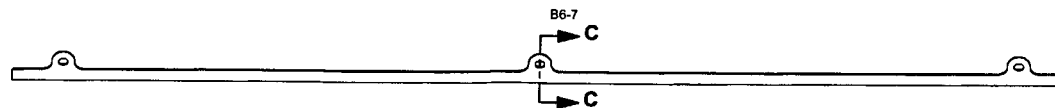
D3847-3F FLAT PATTERN

RELEASED

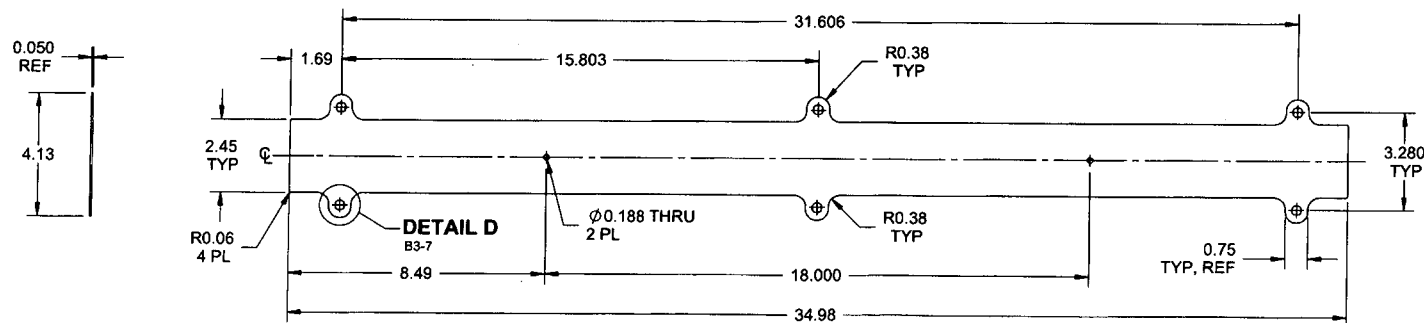
2014 NOV 24 *up*

NOTES:
 1) MATERIAL: AISI 304/316 STAINLESS STEEL PER AMS 5513 OR AMS 5524,
 18 GAUGE (0.050 THICK), (REF. DART SPEC. M304S18GA)
 2) FINISH: POWDER COAT "GREY SANDEX" (4.3.5.6) PER DART QSI 005 4.3
 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 6) IDENTIFICATION: NONE
 7) WEIGHT: 1.48 lbs

DESIGN	RF	DART AEROSPACE USA, INC. KENT, WA	
DRAWN	AK		
CHECKED	VS	DRAWING NO.	REV. C
MFG. APPR.	JLM	D3847	SHEET 3 OF 3
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	WEARPLATE ASSY	NTS
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D3847-5 PLATE
MADE FROM D3847-5F FLAT PATTERN



D3847-5F FLAT PATTERN

RELEASED

2014 NOV 24 4P

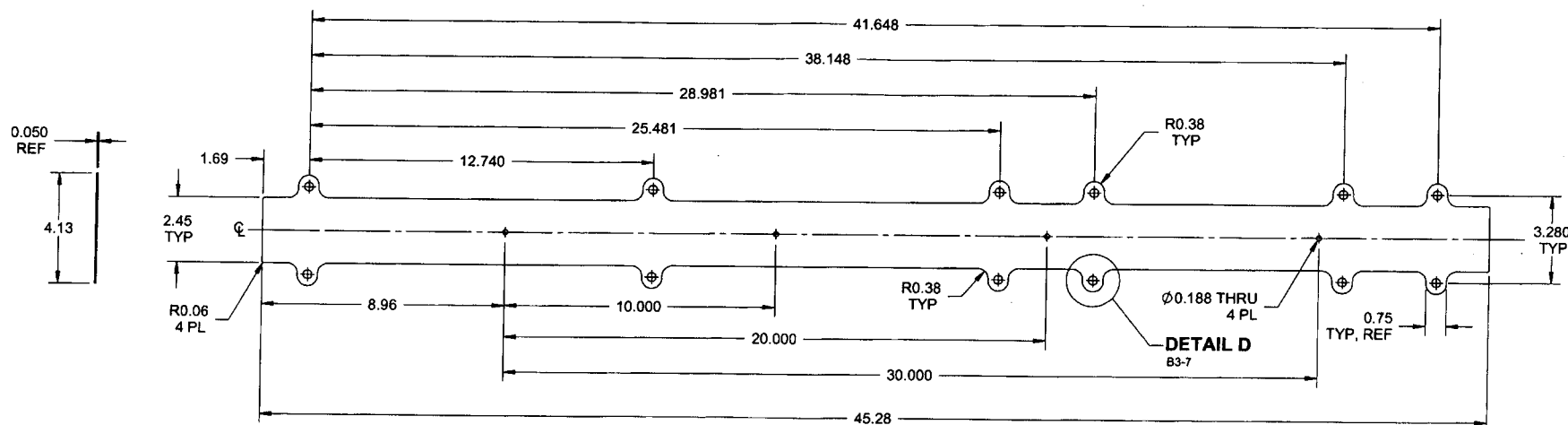
NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL PER AMS 5513 OR AMS 5524, 18 GAUGE (0.050 THICK), (REF. DART SPEC. M304S18GA)
- 2) FINISH: POWDER COAT "GREY SANDEXT" (4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 1.29 lbs

APPROVED

DESIGN	RF	DART AEROSPACE USA, INC. KENT, WA	
DRAWN	AK		
CHECKED	VS	DRAWING NO.	REV. C
MFG. APPR.	JLM	D3847	SHEET 4 OF 7
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	WEARPLATE ASSY	NTS
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D3847-7 PLATE
MADE FROM D3847-7F FLAT PATTERN



D3847-7F FLAT PATTERN

NOTES:

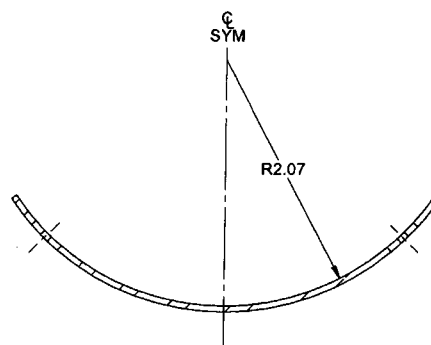
- 1) MATERIAL: AISI 304/316 STAINLESS STEEL PER AMS 5513 OR AMS 5524, 18 GAUGE (0.050 THICK), (REF. DART SPEC. M304S18GA)
- 2) FINISH: POWDER COAT "GREY SANDING" (4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 1.70 lbs

RELEASED

2014 NOV 24 *q*

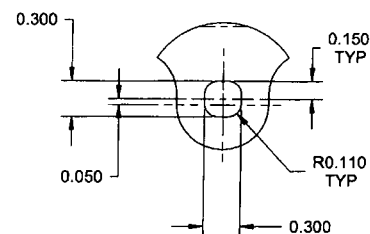
APPROVED

DESIGN	RF	DART AEROSPACE USA, INC. KENT, WA	
DRAWN	AK		
CHECKED	VS	DRAWING NO.	REV. C
MFG. APPR.	JLM	D3847	SHEET 5 OF 7
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	WEARPLATE ASSY	NTS
DATE	14.08.06	COPYRIGHT © 2009 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	



SECTION C-C
SCALE 4X

D4-3
D4-4
D3-5
D3-6



DETAIL D
TYP, SCALE 4X

B5-3
B6-4
B3-5
B5-6

RELEASED

2014 NOV 24 *q*

APPROVED

DESIGN	RF	DART AEROSPACE USA, INC. KENT, WA	
DRAWN	AK		
CHECKED	VS	DRAWING NO.	REV. C
MFG. APPR.	JLM	D3847	SHEET 7 OF 7
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DART AEROSPACE LTD		Work Order:	139750
Description: Plate		Part Number:	D3847-9
Inspection Dwg: D3847	Rev: B C 11/16.02.01		
		Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.188	+0.005/-0.001	Ø.189	/		V.D-02	
0.300	+/-0.010	.304	/		Tap	
0.300	+/-0.010	.305	/			
0.75	+/-0.030	.75	/			
2.45	+/-0.030	2.455	/			
3.280	+/-0.010	3.277	/			
1.69	+/-0.030	1.69	/			
4.13	+/-0.030	4.13	/			
11.50	+/-0.030	11.50	/			
9.000	+/-0.010	9.000	/			
18.000	+/-0.010	18.000	/			
27.000	+/-0.010	27.000	/			
36.000	+/-0.010	36.000	/			
60.00	+/-0.030	60.00	/			
14.490	+/-0.010	14.490	/			
25.480	+/-0.010	25.480	/			
28.980	+/-0.010	28.980	✓			
49.322	+/-0.010	49.322	/			
52.822	+/-0.010	52.822	/			
54.438	+/-0.010	54.438	/			
57.438	+/-0.010	57.438	✓			
0.050	+/-0.010	.045	/			

Measured by:	DL
Date:	16/01/21

Audited by:	38 9.89
Date:	JAN 21 2016

Prototype Approval:	N/A
Date:	N/A

Rev	Date	Change	Revised by	Approved
A	09.09.28	New Issue P/O D3847-049	KJ	

Mario Poulin

From: David Duval
Sent: Wednesday, January 27, 2016 10:32 AM
To: Mario Poulin
Subject: FW: D3847

DAVID DUVAL

Production Engineering Coordinator

From: Harvey Siemens
Sent: January-26-16 4:22 PM
To: Arkam Kindeel <akindeel@dartaero.com>
Cc: David Duval <dduval@dartaero.com>; Jean-Luc Menard <jmenard@dartaero.com>
Subject: RE: D3847

David,

It is not necessary to powder coat these (D3847) wearplates. Please use this email as permission for this deviation as required until we update the drawing. This drawing update will need to be accomplished to include the robotic welding of wearplates and will be done sometime in the future.

Let me know if you need anything else.

Regards,

Harvey Siemens

Director of Engineering – Calgary/Technical Support

DART AEROSPACE

T 1 403 717-0328 > 402

M 1 403 512-4099

www.dartaerospace.com



From: Arkam Kindeel
Sent: January-26-16 2:07 PM
To: Harvey Siemens <hsiemens@dartaero.com>
Subject: FW: D3847

From: David Duval
Sent: January-26-16 12:47 PM
To: Arkam Kindeel; Roberto Fuentes
Cc: Mario Poulin
Subject: D3847

Do we need to powdercoat those wearplate?

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

DAVID DUVAL

Production Engineering Coordinator

DART AEROSPACE

T 1 613 632-5200 > 234

F 1 613 632-5246

1 800 556- 4166

www.dartaerospace.com



DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							